the bones of which were twenty-five arrow points. Twelve of these were made of deer antler and four of bone. Many of the bones of the skeletons were shattered and pierced; one rib in particular presents a cleanly cut hole which was made by a long tapering antler point.

At the time of this discovery only one antler arrow point had been recorded from this portion of New York state.

Certain Rare West Coast Baskets: H. NEWELL WARDLE.

This paper was read by title.

Stone Graves and Cremation Cists in the Vicinity of St. Louis: H. KINNER.

A résumé of explorations in the mounds and bottom lands in the vicinity of St. Louis with an endeavor to determine periods by the manner of inhumation.

Some Drawings from the Estufa of Jemez, New Mexico: A. B. REAGAN.

The drawings shown were made by the speaker during a two years' stay with this Pueblo tribe. The paintings from which the drawings were made were cosmic signs which may be noted in many of the estufas in the southwestern pueblos. The element of white contact was shown in the faces depicting the sun and moon.

This paper was discussed by George A. Dorsey, who dwelt upon the fact that it was no easy matter to persuade the conservative Indians of the Rio Grande region to divulge the meaning of their sacred symbols.

A Glossary of the Mohegan-Pequot Language: J. D. PRINCE and FRANK G. SPECK.

Read by title. Will be published in the *American Anthropologist.*

The newly elected officers for the Washington meeting are:

Vice-President—Walter Hough, U. S. National Museum, Washington, D. C.

Secretary—George H. Pepper, American Museum of Natural History, New York City.

GEORGE H. PEPPER,
Secretary.

CHARLES EMERSON BEECHER.

DR. CHARLES EMERSON BEECHER, professor of paleontology and curator of the geological collections in the Peabody Museum of Yale University, died very suddenly at his home in New Haven on the fourteenth of February, of an affection of the heart. Up to within an hour of his demise he had appeared in his usual health.

Dr. Beecher was the son of Moses and Emily (Emerson) Beecher, born at Dunkirk, New York, October 9, 1856. He was prepared for college at the high school of Warren, Pa., took the scientific course at the University of Michigan and was graduated as B.S. in 1878. His tastes had led him to a study of the native invertebrates, living and fossil, and after graduation he became an assistant to Professor James Hall, State Geologist of New York, and incidentally an expert collector and skilled preparator of fossils, in which the State Museum is so rich. Here he remained ten years, during which he perfected himself in the science of invertebrate paleontology, and then through the influence of Professor Marsh was placed in charge of the collection of invertebrate paleontology at Yale. Here he pursued his studies for the doctorate of philosophy, which he received from the university in 1889, his thesis being a memoir on a group of Silurian sponges. At the instance of Professor Marsh he spent the summer of that year collecting fossils in Wyoming. Subsequently he accompanied Dr. G. Baur on a visit to various European museums. He had had the advantage of a course in geology under Dana, and in 1891–2, during the illness of that veteran teacher, he conducted the classes in geology. In 1892 he was made the assistant professor of historical geology in the Sheffield Scientific School, and in 1897 full professor and a member of the governing board. March 10, 1902, his title was changed to that of university professor of paleontology. In 1899 he succeeded the late Professor Marsh as curator of the geological collections and became a member of the board of trustees of the Peabody Museum. At the time of his death he was secretary to the board and a member of the executive committee. In 1899 he was elected a member of the National Academy of Sciences, a correspondent of the Geological Society of London and a fellow of the Geological Society of America. In 1900 he became president of the Connecticut Academy of Arts and Sciences and held this office until 1902.

Professor Beecher married, September 12, 1894, Miss Mary S. Galligan, who with two young daughters survives him. The interment was in Grove Street Cemetery, New Haven.

Like most successful students of organic life, Beecher was a born naturalist. As a boy he collected the shells of the region about Warren, Pa., where his home was situated, and his first scientific paper, published in conjunction with Mr. Walker, was a list of the land and fresh-water shells found about Ann Arbor, Michigan, the seat of the state university. The abundance of Devonian fossils about his home at Warren doubtless contributed to his early interest in them. In 1884 he published his first paleontological paper, an essay on the rare Paleozoic crustaceans known as phyllocarida, a subject to which he returned eighteen years later in a memoir which will be classical. Always a field naturalist, after his connection with the Sheffield Scientific School began his opportunities for work in the west became more frequent and fruitful. On becoming curator of the geological collections he presented to the university his private collection of fossils, the result of many years of accumulation and of great scientific value.

Beecher was one of those students who derived from the teachings of Hyatt and Cope those guiding principles in research which have proved so fruitful for American science. By the application of these principles, together with a thorough and minute knowledge of details, he produced those memoirs on the Trilobites, the Brachiopoda and the origin and significance of spines, upon which (with much other worthy work) his reputation in days to come will chiefly rest. Space fails for an analysis of these contributions, which are universally known among professional experts.

Beecher had the artist's gift and his papers were largely illustrated by himself, many of his drawings being of a high order of merit. He had the sense of order and proportion so necessary for a museum expert. He was quiet, cautious, without ostentation, efficient and enthusiastic.

The director of the scientific school has said of him:* "Quiet and unassuming, he never sought adulation, but when there was earnest work to be done, requiring skill, patience and good judgment, he would labor quietly and industriously, bringing to bear upon the problem such a measure of common sense and of thoughtfulness that confidence in and respect for his conclusions were inevitable. * * * No matter how trivial the duty, it was always done at the appointed time and thoroughly done. * * * As a friend he was loyal and trustworthy and his memory will always be cherished by his associates in the Sheffield Scientific School."

One of his pupils has testified to the inspiration given by him to his students, and how his patience, perseverance and inge-

* *Yale Alumni Weekly*, XIII., p. 488, March 2, 1904.

nuity served as an incentive to his associates, who were drawn closely to him by his enthusiasm and entire lack of egotism.

There is no doubt that in the death of Professor Beecher, not only has Yale sustained a serious loss and paleontology a severe blow, but the ranks of those capable of bringing to the study of fossils keen insight and a philosophical spirit of enquiry, guided by principles whose value can hardly be exaggerated, are diminished by one whom science could ill afford to lose, and to whom, humanly speaking, there should have remained many years of industrious and fruitful research. W. H. DALL.

SCIENTIFIC BOOKS.

THE MARK ANNIVERSARY VOLUME.*

VOLUMES in celebration of some noteworthy educational event are more common in Europe than with us, and naturally so. The advanced courses of instruction which alone can produce a body of trained disciples have had only about a quarter of a century's existence in America. As time goes on these memorials will doubtless increase in number; at present they can be counted on the fingers of one hand.

Few men have had more influence upon the highest class of zoological work in America than Professor Mark. Leaving his early mathematics and astronomy, he went to Germany, worked there with Leuckart and Haeckel and, on his return, at once entered the teaching force at Harvard. What he has accomplished during these years can only be realized by reading the list of the one hundred and forty former students who sign the appreciative dedication of this volume, and by examining the long list of papers turned out from the laboratory under his charge.

It is impossible for one man to write a critical review of the twenty-five papers which are contained in this splendid quarto volume. Even a bare summary of the articles will take more space than this journal can spare. All that can be done is to enumerate the papers, with such hints of their contents as will convey some idea of their scope. A fine photogravure of Professor Mark forms the frontispiece; then follows the dedication, to which allusion has been made, and next the papers which make up the volume. These have a wide range of subjects, but one thing which is striking is the small number of strictly embryological articles such as formed the bulk of the work from his laboratory during the first half of his labors at Harvard.

Two of the papers deal with habits. H. R. Linville deals with a couple of tube-building annelids, describing among other things the manner in which they build their tubes; while Jacob Reighard gives a long, detailed and interesting account of the habits of *Amia,* especially during the breeding season and the care of the young.

Four of the papers describe new species. C. A. Kofoid describes a new protozoan, *Protophrya ovicola* allied to *Opalina,* found in the food sac of *Littorina rudis.* S. Goto gives an account of two new medusæ, *Olindoides formosa* and *Gonionema depressum,* from Japan, pointing out that these genera with *Olindias, Halicalyx* and *Gonionemoides* form a natural family Olindidæ, and that the problematical fresh-water genera *Limnocodium* and *Limnocnida* belong near them. Four new species of trematodes, three of them from the air passages of snakes and one from the frog, form the subject of the paper by H. S. Pratt, while H. P. Johnson describes three species of polychæte annelids from the fresh waters of the world, enumerating in his article twenty-four species of the group known to occur in fresh water.

The morphological articles are more numerous. J. H. Gerould discusses the development of *Sipunculus* and *Phascalosoma* from the beginning of gastrulation to the escape of the larva, pointing out that the 'serosa' of *Sipunculus* is a modification of the prototroch

*'Mark Anniversary Volume To Edward Laurens Mark, Hersey Professor of Anatomy and Director of the Zoological Laboratories at Harvard University, in celebration of twenty-five years of successful work for the advancement of zoology, from his former students, 1877–1902.' New York, Henry Holt and Company. 1903. Pp. xiv + 513; 36 plates.